

1 Amendments to the Specification

2 Paragraph beginning on page 15, line 17 and ending on page 16, line  
3 15 is replaced with the following rewritten paragraph.

4  
5 In step 1, a catalysis solution is first formed from water, an  
6 acid, and an oxidizer. The acid is preferably hydrochloric acid  
7 HCl, but other acids may be used, such as sulfuric acid  $H_2SO_4$ ,  
8 nitric acid  $HNO_3$ , perchloric acid  $HClO_4$ , phosphoric acid  $H_3PO_4$ ,  
9 acetic acid  $CH_3COOH$ , formic acid  $HCOOH$ , tartaric acid  $C_4H_6O_6$ ,  
10 methanesulfonic acid  $CH_3SO_3$ , ethylsulfonic acid  $C_2H_5SO_3$ , 4-  
11 toluenesulfonic acid  $C_7H_8SO_3$ , and camphorsulfonic acid (CSA). The  
12 oxidizer is preferably ammonium peroxydisulfate  $(NH_4)_2S_2O_8$ , but  
13 other oxidizers may be used, such as iron chloride  $FeCl_3$  and other  
14 peroxydisulfate derivatives such as  $Na_2S_2O_8$  and  $K_2S_2O_8$ . In step 2, a  
15 monomer solution is formed from a solution of a nonconducting  
16 monomer and an organic solvent. In the preferred form, the monomer  
17 is aniline, but other carbon-based organic monomers can be used,  
18 such as pyrrole, thiophene, toluidine, anisidine and other  
19 derivatives of aniline such as methylaniline, ethylaniline, 2-  
20 alkoxyaniline, and 2,5-dialkoxyaniline monomers, for forming  
21 polyaniline, polypyrrole, polythiophene, polytoluidine,  
22 polyanisidine, polymethylaniline, polyethylaniline, poly(2-  
23 alkoxyanilines) and poly(2,5-dialkoxyanilines) respectively. The  
24 organic solvent is preferably carbon tetrachloride ( $CCl_4$ ), but other  
25 organic solvents may be used, such as benzene, toluene, chloroform,  
26 methylene chloride, xylene, hexane, diethylether, dichloromethane  
27 and carbon disulfide. In the preferred form, aniline monomers are  
28 dissolved in carbon tetrachloride ( $CCl_4$ ).